

AMENDMENT OF THE CLAIMS:

A complete listing of the claims and their status as of this Amendment is as follows:

1.(Previously presented) An impeller suitable for use in a centrifugal pump, for handling liquid mixtures containing particulate solids, the impeller including a front shroud having opposed faces, an outer peripheral edge portion and a rotation axis, a back shroud having opposed faces, an outer peripheral edge portion and a rotation axis, a plurality of pumping vanes positioned between the front and back shroud and extending away from the rotation axis, each pumping vane having an outer peripheral edge portion, and a plurality of auxiliary vanes on the other face of at least one shroud, the auxiliary vanes each having an outer edge portion, wherein the dimension D_a from the rotation axis to the outer peripheral edge portion of the shrouds is greater than the dimension D_b from the rotation axis to the outer edge portion of the auxiliary vanes and wherein D_a is greater than the dimension D_c from the rotation axis to the outer peripheral edge portion of the pumping vanes and wherein the dimension D_a of the one of the shrouds is greater than the dimension D_a of the other shroud.

Claims 2-3 (Cancelled)

4.(Previously presented) An impeller according to claim 1 wherein the auxiliary vanes are located on the other face of one of the shrouds.

5.(Previously presented) An impeller according to claim 1 wherein the impeller further comprises auxiliary vanes being positioned on the other face of each of the front shroud and back shroud.

6.(Previously presented) An impeller according to claim 1 wherein the dimension D_a of the front shroud is greater than the dimension $D_{a'}$ of the back shroud.

7.(Previously presented) An impeller according to claim 1 wherein the dimension Da' of the back shroud is greater than the dimension Da of the front shroud.

Claims 8-11 (Cancelled)

12.(Previously presented) An impeller according to claim 1 wherein Db and Dc are substantially the same.

13.(Previously presented) An impeller according to claim 1 wherein Db and Dc are within 5% of each other.

14.(Previously presented) An impeller according to claim 1 wherein Db is less than $0.95 Da$.

15.(Original) An impeller according to claim 14 wherein Db/Da is from 0.65 to 0.95.

16.(Original) An impeller according to claim 14 wherein Db/Da is from 0.65 to 0.9.

17.(Currently amended) An impeller suitable for use in a centrifugal pump, for handling liquid mixtures containing particulate solids, the impeller including at least one shroud having opposed faces, an outer peripheral edge portion and a rotation axis, a plurality of pumping vanes on one of the faces of said at least one shroud extending away from the rotation axis, each pumping vane having an outer peripheral edge portion, and a plurality of auxiliary vanes on the other opposing face of said at least one shroud, the auxiliary vanes each having an outer edge extending axially from said other opposing face of said at least one shroud that is oriented at an angle Z to a line parallel to the rotation axis and angled downwardly from said opposing face of said at least one

shroud toward said rotational axis, and wherein the dimension D_a defined by the distance from the rotation axis to the outer peripheral edge portion of said at least one shroud is greater than the dimension D_b defined by the distance from the rotation axis to the outer edge of the auxiliary vanes, and wherein D_a is greater than the dimension D_c defined by the distance from the rotation axis to the outer peripheral edge portion of the pumping vanes.

18.(Previously presented) The impeller of claim 17 wherein said angle Z of said outer edge of said auxiliary vanes is about 45° .

19.(Previously presented) The impeller of claim 17 wherein said at least one shroud further comprises a front shroud and a back shroud.

20.(Previously presented) The impeller of claim 19 further comprising auxiliary vanes on both said front shroud and said back shroud.

21.(Previously presented) The impeller of claim 19 wherein said front shroud has a diameter D_a and said back shroud has a diameter $D_{a'}$, and the dimension D_a is greater than $D_{a'}$.

22.(Previously presented) The impeller of claim 19 wherein said front shroud has a diameter D_a and said back shroud has a diameter $D_{a'}$, and the dimension $D_{a'}$ is greater than D_a .

23.(Previously presented) The impeller of claim 19 wherein said front shroud has a diameter D_a and said back shroud has a diameter $D_{a'}$, and the dimensions of D_a and $D_{a'}$ are both greater than the dimension D_b .

24.(Previously presented) The impeller of claim 17 wherein the dimension D_b is

approximately the same as the dimension Dc.

25.(Previously presented) The impeller of claim 17 wherein the dimension Db is within 5% of the dimension Dc.

26.(Previously presented) The impeller of claim 17 wherein said dimension Db is between 65% to 95% of the dimension Da of said at least one shroud.